

IN THE CLAIMS

Please amend the claims, as follows:

1. (Currently amended) An isolated antigen-presenting cell for modulating an immune response, which is characterised by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50%~~ of that produced by an activated dendritic cell.

2. (Original) An antigen-presenting cell according to claim 1, wherein CD40, or its equivalent, is produced at a level or functional activity that is less than about 1% of that produced by an activated dendritic cell.

3. (Original) An antigen-presenting cell according to claim 1, which cannot be induced to express CD40, or its equivalent, at an equivalent level and/or functional activity as that produced by an activated antigen presenting cell.

4. (Original) An antigen-presenting cell according to claim 1, wherein CD40, or its equivalent, is produced at a level or functional activity that is lower than that produced by an immature dendritic cell.

5. (Original) An antigen-presenting cell according to claim 1, which cannot be induced to express CD40, or its equivalent, at a higher level and/or functional activity than that produced by an immature antigen-presenting cell.

6. (Original) An antigen-presenting cell according to claim 1, which is other than a B lymphocyte.
7. (Original) An antigen-presenting cell according to claim 1, which is selected from monocytes, macrophages, cells of myeloid lineage, dendritic cells or Langerhans cells.
8. (Original) An antigen-presenting cell according to claim 1, which is a dendritic cell.
9. (Original) An antigen-presenting cell according to claim 1, which is a macrophage.
10. (Original) An antigen-presenting cell according to claim 1, which produces NF- κ B or a component thereof, at a level or functional activity which is lower than that produced by a mature or activated dendritic cell.
11. (Original) An antigen-presenting cell according to claim 1, which cannot be induced to express NF- κ B or component thereof, at a higher level and/or functional activity than an immature antigen presenting cell.

12. (Original) An antigen-presenting cell according to claim 1, which produces NF- κ B or a component thereof, at a level or functional activity that is lower than that produced by an immature dendritic cell.

13. (Currently Amended) An antigen-presenting cell according to any one of [[claim]] claims 10 to 12, wherein the component is RelB.

14. (Original) An antigen-presenting cell according to claim 1, which produces an immunostimulatory molecule.

15. (Original) An antigen-presenting cell according to claim 14, wherein the immunostimulatory molecule comprises CD86 or its equivalent.

16. (Original) An antigen-presenting cell according to claim 14, wherein the immunostimulatory molecule is produced at a level or functional activity which is at least about 10% of that produced by an activated dendritic cell.

17. (Original) An antigen-presenting cell according to claim 14, wherein the immunostimulatory molecule is produced at a level or functional activity which is the same as that produced by an activated dendritic cell.

18. (Original) An antigen-presenting cell according to claim 1, which is produced by a process comprising contacting a precursor of the antigen-presenting cell with an NF- κ B

inhibitor for a time and under conditions sufficient to differentiate an antigen-presenting cell from the precursor and to inhibit or otherwise reduce the level and/or functional activity of NF- κ B in the cell.

19. (Original) An antigen-presenting cell according to claim 18, wherein the precursor is derived from monocytes or bone marrow.

20. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor inhibits nuclear translocation of NF- κ B, or a component thereof.

21. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor inhibits nuclear translocation of RelB.

22. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is an antisense nucleic acid molecule or oligonucleotide, which is complementary or encodes at least a portion of a NF- κ B subunit selected from p50, p65 or RelB.

23. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is an inhibitor of RelB or p50.

24. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is an inhibitor of RelB or p50, which is selected from a ribozyme that selectively destroys RNA encoding NF- κ B or component thereof, an antisense molecule which prevents

transcription of NF-κB or component thereof, or an antigen-binding molecule that blocks NF-κB action.

25. (Original) An antigen-presenting cell according to claim 18, wherein the NF-κB inhibitor is an indirect inhibitor of NF-κB selected from inhibitors of IκB degradation, inhibitors of IκB phosphorylation, inhibitors of IκB ubiquitination and inhibitors of proteolytic degradation of IκB.

26. (Original) An antigen-presenting cell according to claim 18, wherein the NF-κB inhibitor is an inhibitor of IκB phosphorylation.

27. (Original) An antigen-presenting cell according to claim 18, wherein the NF-κB inhibitor is BAY 11-7082.

28. (Original) An antigen-presenting cell according to claim 18, wherein the NF-κB inhibitor is an indirect inhibitor of NF-κB selected from inhibitors of proteolysis and inhibitors of nuclear translocation of NF-κB.

29. (Original) An antigen-presenting cell according to claim 18, wherein the NF-κB inhibitor is an inhibitor of nuclear translocation of NF-κB selected from deoxyspergualin or deoxyspergualin derivatives or analogues.

30. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is an inhibitor of proteolysis selected from proteosome inhibitors.

31. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is a proteosome inhibitor selected from PSI, ALLN, lactacystin, MG-132, C-LFF and calpain inhibitors.

32. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is an indirect inhibitor of NF- κ B selected from caffeic acid phenethyl ester, pyrrolidine dithiocarbonate, lovastatin, aselastine HCL, tepaxalin, (-)-epi gallocatechin-3-gallate, phenyl-N-tert-butylnitron, quercetin, cucumin or E330.

33. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor inhibits proteolysis.

34. (Original) An antigen-presenting cell according to claim 18, wherein the NF- κ B inhibitor is a proteosome inhibitor.

35. (Original) An antigen-presenting cell according to claim 1, which is produced by a process comprising contacting an antigen-presenting cell, or its precursor, with an inhibitor of CD40, or its equivalent, for a time and under conditions sufficient to produce a modified antigen-presenting cell that produces CD40, or its equivalent, at a reduced or abrogated level or functional activity relative to that of the antigen-presenting cell or its precursor.

36. (Original) An antigen-presenting cell according to claim 35, wherein the process further comprises contacting the antigen-presenting cell, or its precursor, or the modified antigen-presenting cell, with an agent that increases the level or functional activity of an immunostimulatory molecule for a time and under conditions sufficient to enhance or otherwise elevate the level or functional activity of the immunostimulatory molecule in the antigen-presenting cell, or its precursor, or the modified antigen-presenting cell.

37. (Original) An antigen-presenting cell according to claim 35, wherein the process further comprises contacting the antigen-presenting cell, or its precursor, or the modified antigen-presenting cell, with an agent that increases the level or functional activity of CD86 or its equivalent, for a time and under conditions sufficient to enhance or otherwise elevate the level or functional activity of CD86 or its equivalent in the antigen-presenting cell, or its precursor, or the modified antigen-presenting cell.

38. (Currently amended) A method of producing antigen-presenting cells for modulating an immune response to a target antigen, comprising contacting an antigen-presenting cell, or its precursor, with an antigen that corresponds to the target antigen, or with a polynucleotide from which the antigen is expressible, for a time and under conditions sufficient for the antigen or a processed form thereof to be presented by the antigen-presenting cell, or its precursor, wherein antigen-presenting cell, or its precursor, is characterized by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50% of that produced by an activated dendritic cell.~~

39. (Original) A method according to claim 38, wherein the antigen presentation is restricted by major histocompatibility (MHC) molecules.

40. (Currently amended) An antigen-specific antigen-presenting cell for modulating an immune response to a target antigen, which is produced by contacting an antigen-presenting cell, or its precursor, with an antigen that corresponds to the target antigen, or with a polynucleotide from which the antigen is expressible, for a time and under conditions sufficient for the antigen or a processed form thereof to be presented by the antigen-presenting cell, or its precursor, wherein antigen-presenting cell, or its precursor, is characterised by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50% of that produced by an activated dendritic cell.~~

41. (Original) A method of producing antigen-presenting cells for modulating an immune response to a target antigen, comprising contacting a precursor of the antigen-presenting cell with an NF- κ B inhibitor and with an antigen that corresponds to the target antigen, or with a polynucleotide from which the antigen is expressible, for a time and under conditions sufficient to differentiate an antigen-presenting cell from the precursor and to inhibit or otherwise reduce the level or functional activity of NF- κ B in the cell, wherein the antigen or a processed form thereof is presented by the antigen-presenting cell so produced.

42. (Original) A method according to claim 41, wherein the immune response is mediated by T lymphocytes.

43. (Original) A method according to claim 41, wherein the T lymphocytes are selected from cytotoxic T lymphocytes (CTLs) and T helper lymphocytes.

44. (Original) A method according to claim 41, wherein the antigen is selected from a protein antigen, a particulate antigen, an alloantigen, an autoantigen, an allergen, a bacterial antigen, a viral antigen or a parasitic antigen or immune complex.

45. (Original) A method according to claim 41, wherein the modulation of the immune response is selected from inducing a tolerogenic response, or the suppression of a future or existing immune response, to a specified antigen or group of antigens.

46. (Currently amended) A method for producing T lymphocytes that exhibit anergy for a target antigen, comprising contacting a population of T lymphocytes, or their precursors, with an antigen-specific antigen-presenting cell, which is characterised by producing CD40, or its equivalent, at a level or functional activity which is lower than that is less than about 50% of that produced by an activated dendritic cell, for a time and under conditions sufficient to produce the anergic T lymphocytes.

47. (Original) A method according to claim 46, wherein the T lymphocytes are selected from cytotoxic T lymphocytes (CTLs) and T helper lymphocytes.

48. (Original) A method according to claim 46, wherein the antigen is selected from a protein antigen, a particulate antigen, an alloantigen, an autoantigen, an allergen, a bacterial antigen, a viral antigen or a parasitic antigen or immune complex.

49. (Currently amended) A T lymphocyte that exhibits anergy for a target antigen, which is produced by contacting a T lymphocyte, or its precursor, with an antigen-specific antigen-presenting cell, which is characterised by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50%~~ of that produced by an activated dendritic cell, for a time and under conditions sufficient to produce the anergic T lymphocyte.

50. (Currently amended) A method for modulating the immune response to an antigen, comprising administering to a patient in need of such treatment an antigen-specific antigen-presenting cell for a time and under conditions sufficient to modulate the immune response, wherein the antigen-specific antigen-presenting cell is produced by contacting an antigen-presenting cell with an antigen that corresponds to the target antigen, or with a polynucleotide from which the antigen is expressible, for a time and under conditions sufficient for the antigen or a processed form thereof to be presented by the antigen-presenting cell, wherein antigen-presenting cell is characterised by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50%~~ of that produced by an activated dendritic cell.

51. (Currently amended) A method for modulating the immune response to an antigen, comprising administering to a patient in need of such treatment an anergic T lymphocyte for a time and under conditions sufficient to modulate the immune response, wherein the anergic T lymphocyte is produced by contacting a population of T lymphocytes, or their precursors, with an antigen-specific antigen-presenting cell, which is characterised by producing CD40, or its equivalent, at a level or functional activity ~~which is lower than that is less than about 50% of~~ that produced by an activated dendritic cell, for a time and under conditions sufficient to produce the anergic T lymphocytes.

52-55. (Canceled)

56. (Original) A method for treatment and/or prophylaxis of a disease or condition whose symptoms or aetiology are associated with the presence of an immune response, comprising administering to a patient in need of such treatment or prophylaxis an effective amount of one or both of an antigen-specific antigen-presenting cell according to claim 40 and/or of an anergic T lymphocyte according to claim 49.

57-58. (Canceled)

59. (New) A method of treating an allergy in a subject, comprising administering to said subject a cell according to claim 40.

60. (New) A method of treating an allergy in a subject, comprising administering to said subject a cell according to claim 49.

61. (New) A method of treating or preventing an autoimmune disease in a subject, comprising administering to said subject a cell according to claim 40.

62. (New) A method of treating or preventing an autoimmune disease in a subject, comprising administering to said subject a cell according to claim 49.

63. (New) A method of treating or preventing transplant rejection disease in a subject, comprising administering to said subject a cell according to claim 40.

64. (New) A method of treating or preventing an autoimmune disease in a subject, comprising administering to said subject a cell according to claim 49.